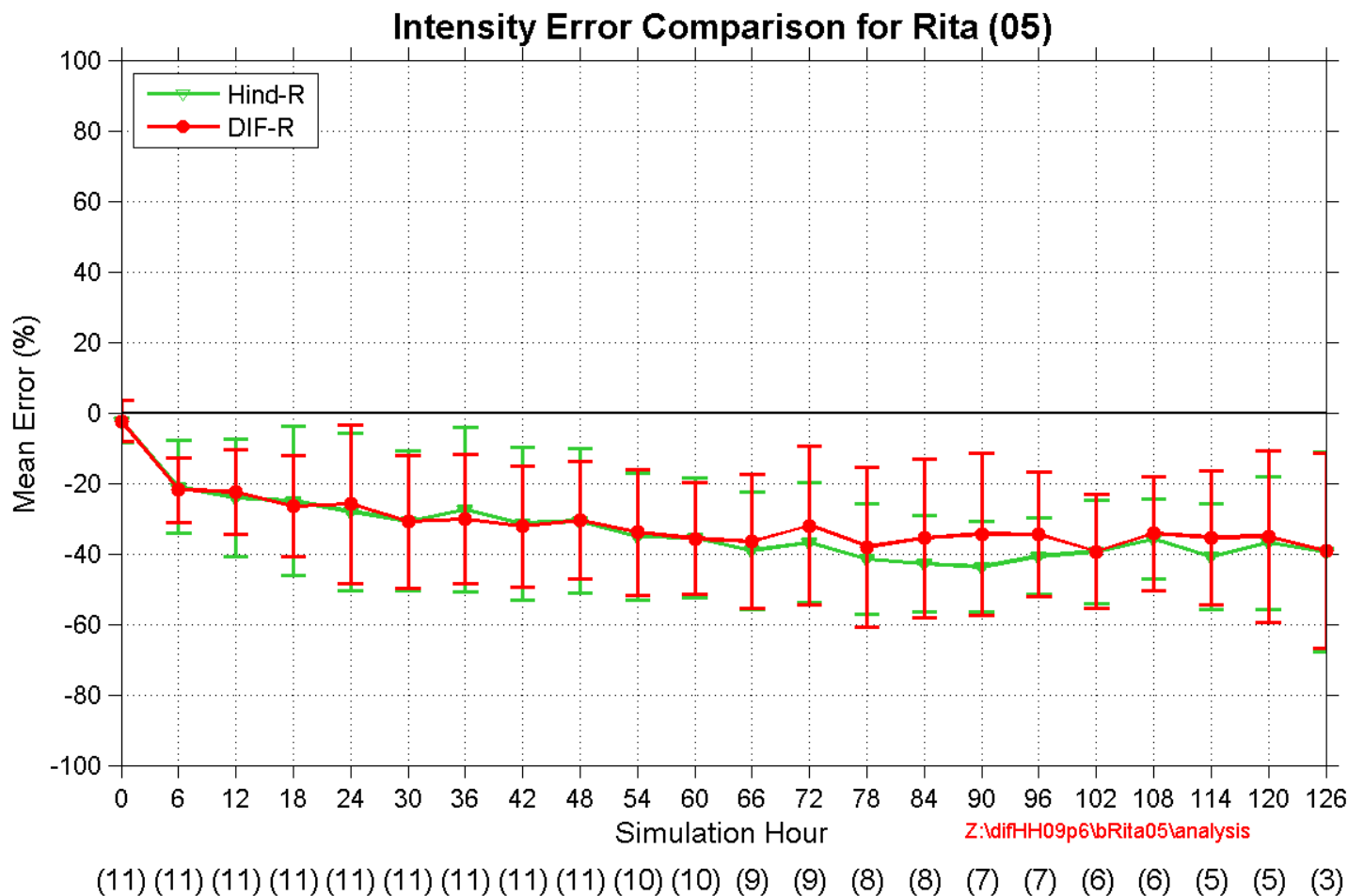


# Hurricane Intensity Project Description

---

- Team members from NWS National Centers for Environmental Prediction (NCEP), OAR's Atlantic Oceanographic and Meteorological Laboratory (AOML), NESDIS CoastWatch, and IOOS Program
- Project designed to address assumption that integrating data across NOAA from various sources and applying standards for the integration adds value to NWS hurricane intensity model
- Coordination began last year, work began this calendar year with identification of three storms, creating additional data (Temperature-Salinity profiles for each storm) and other data required for model runs of the coupled HYCOM-HWRF system

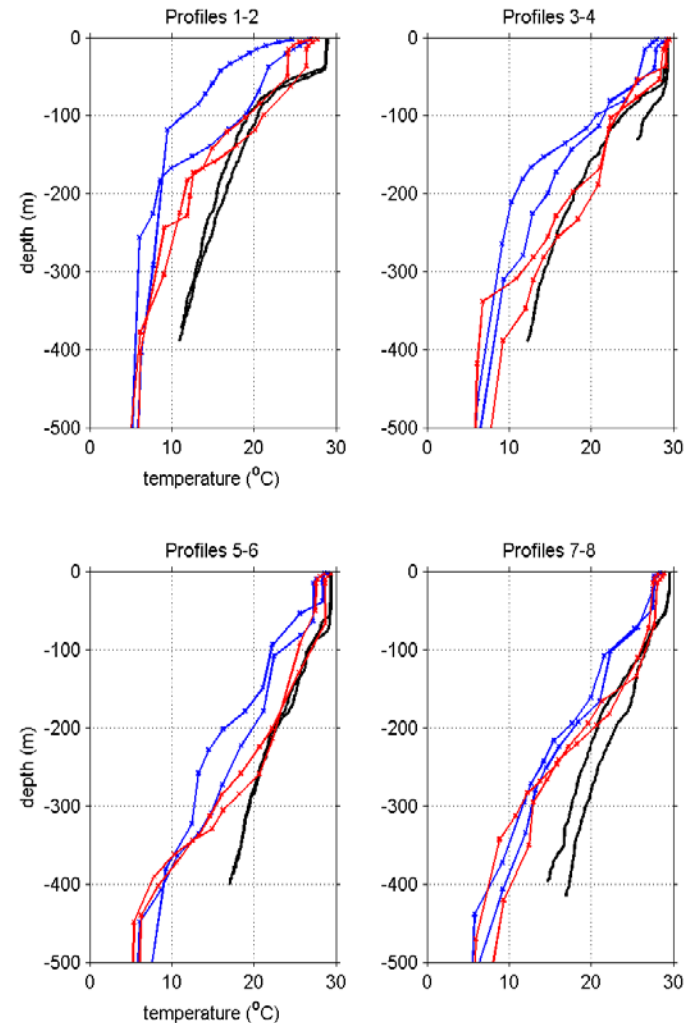
# Hurricane Intensity Project - Initial Results



\*Graph shows error of maximum sustained wind at each model run time

# Hurricane Intensity Project - Initial Results

- Additional data helps in moving the water masses near the thermocline depths ( $> 50$  m), towards the AXBT profiles, with less impact near the surface.



AXBT profiles (black) vs model results with additional data (blue) and without data (red)

# Hurricane Intensity Project Milestones and Challenges

---

- Key remaining near term milestones
  1. Complete model runs for all three storms
  2. Evaluate the model runs to determine value of additional data for hurricane intensity
- Challenges -
  - Legacy system requirements for data input
  - NCEP computer upgrade
  - Drawing conclusions based on limited scope project
  - Evaluation process at NCEP requires more resources.

# Hurricane Intensity Project Next Steps and Recommendations

---

- Produce evaluation assessment report by end of calendar year
- Suggest modifications to existing ocean observing systems for hurricane intensification prediction
- Evaluate additional storms with additional data
- Provide improved salinity data (vice climatology) using observations
- Engineer data flow that meets operational requirements